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CALIFORNIA EARTH SCIENCE CORPORATION

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Fault Tectonics and Earthquake Hazards in the Peninsular Ranges,
Southern California, EREP Investigation 463

NASA-Lyndon B. Johnson Space Center
Technical Support Procurement Branch
Houston, Texas 77058

Attention: Mrs. Ruth Elder, Mail Stop BB631 (B9)

Dear Mrs. Elder:

California Earth Science Corporation (CalESCO) is pleased to submit its 19th
Monthly Progress Report on the application of Skylab imagery to analysis of
fault tectonics and earthquake hazards in the Peninsular Ranges, Southern
California under NASA Contract No. NAS 2-7698.

Summary Outlook

The principal plans for the immediate future are to continue analysis of images
from SL1/SL2 and SL3. The milestone plan provides a time-oriented schedule of
the entire effort to be performed.

Significant Progress

1. Four more S192 tapes were received from JSC.
2. The 6 tapes previously received have been read at JPL and images are being generated.
3. In a telecom with Vic Mazade, it was requested that we be advised if additional S192 data from EREP Pass 2 over our test site had been processed.
4. The program that read the S192 interim tapes contained some errors which have now been corrected.
5. The computer generated gray scale charts are nearly completed.
6. Field and laboratory work was accomplished on the San Diego River lineament. Thin sections were made of fine-grained tabular rock bodies parallel to the lineament. Preliminary study of the thin sections under a petrographic

(E75-10108) FAULT TECTONICS AND EARTHQUAKE
HAZARDS IN THE PENINSULAR RANGES, SOUTHERN
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Monica.) 2 p HC \$3.25

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microscope revealed that the rocks have a cataclastic texture. Right separation of contacts has also been observed along the lineament. The available data indicate that the prominent lineation along the San Diego River seen on ERTS and Skylab images is the result of erosion along a series of en echelon faults.

7. The following technical report was completed: Investigation of lineaments on Skylab and ERTS images of the Peninsular Ranges, southwestern California, CalESCO Tech. Rpt. 74-5. (This is an up-date of Tech. Rpt. 74-1, submitted in August 1974.)
8. Work was continued on a technical report describing our analysis of the Tract 63 190A images from San Geronimo Pass to the Gulf of California, including the San Andreas and San Jacinto fault zones.

Expected Accomplishments, Current Month

1. Pseudocolor transformations of the computer generated test charts will be produced.
2. Work on current technical reports will be continued.
3. Field work will be continued on the northeast trending lineaments of the Peninsular Ranges.

Travel Summary and Plans

Several days will be spent in the field near Julian, Ramona and Alpine, California.

Very truly yours,

CALIFORNIA EARTH SCIENCE CORPORATION

Paul M. Merifield

Paul M. Merifield
Principal Investigator

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